

REMARKS

Claims 1-52 are pending with claims 1-4 being independent.

Independent claim 1 and dependent claims 5-15 and 19 have been rejected as being unpatentable over Keyser (U.S. Patent No. 6,072,278) in view of O'Brien ("Improved energy transfer in electrophosphorescent devices", Applied Physics Letters, 1999) and further in view of Baldo ("Very high-efficiency green organic light-emitting devices based on electrophosphorescence", Applied Physics Letters, 1999).

Claim 1 recites a light emitting device having, among other elements, a first EL element for emitting red light, a second EL element for emitting green light, and a third EL element for emitting blue light, and further recites that "a triplet compound is used for the first EL element while a singlet compound is used in each of the second and third EL elements." Applicant requests reconsideration and withdrawal of the rejection of claim 1 and its dependent claims because neither Keyser, O'Brien, Baldo, nor any combination of these references describes or suggests the claimed combination of three EL elements.

As applicant stated in the response mailed July 31, 2003, Keyser describes a structure for creating an active matrix pixel with a hold capacitor having a high capacitance for very small pixel sizes. As the Examiner admits, Keyser does not describe or suggest a structure having the claimed combination of EL elements. O'Brien and Baldo also fail to describe or suggest the claimed combination of EL elements. O'Brien describes a triplet compound for use in an EL device and Baldo describes a singlet compound for use in an EL device. However, neither describes or suggests using both a triplet compound and a singlet compound in a single device, nor doing so in the recited combination of three EL elements that emit light of different colors.

The Examiner states in Response to Arguments that

... the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Keyser reference discloses an active matrix electroluminescent display device and O'Brien reference and Baldo reference teaches different type of well known electroluminescent materials used in a electroluminescent display device, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize different electroluminescent material in an electroluminescent display device in

order to obtain the desired characteristics of the display. Further, it is old and well known in the art to utilize different type of electroluminescent material to generate light beam with different wavelength in different pixels of a single electroluminescent display device and furthermore it is the intrinsic property of different electroluminescent materials to emit light beam with different wavelength, therefore it would have been obvious to utilize different types of electroluminescent materials in one single electroluminescent display device in order to obtain the desired light beam with desired wavelength for the viewing pleasure. Thus, Examiner asserts that the combination of Keyser reference in view of O'Brien reference in further view of Baldo reference is valid and maintains the rejection.

The Examiner is taking official notice that combining different electroluminescent materials (such as a singlet compound material and a triplet compound material) in different pixels in a single electroluminescent display device is well-known in the art. In accordance with MPEP §2144.03, applicants traverse this assertion and request that the Examiner cite a reference in support of this position.

Even if the Examiner is able to procure a reference showing a single electroluminescent display device with a pixel using a singlet compound and another pixel using a triplet compound, a suggestion to use the singlet compound for the first EL element emitting a *red* light and using the triplet compound for the second and third EL elements emitting a *green* light and a *blue* light, respectively, must be found. As discussed on page 6, lines 8-23, this particular combination of EL elements offers the advantage of decreasing the problem of a shift in color balance by balancing the deterioration of the three EL elements. Specifically, a light emitting layer that emits red light deteriorates faster than a light emitting layer that emits other colored light. This typically results in a shift in color balance due to the red light decreasing in brightness faster than the green and blue lights. However, if a higher luminous efficiency material, such as a triplet compound, is used as the light emitting layer that emits red light, the deterioration of the red light emitting layer is decreased. Accordingly, the deterioration of the red, blue, and green light emitting layers may be better balanced to decrease the problem of color balance shift by using a higher luminous efficiency triplet compound as the red light emitting layer and a lower luminous efficiency singlet compound as the blue and green light emitting layers. Accordingly, the specific combination of using a triplet compound for the red light emitting layer and a singlet compound for the green and blue light emitting layers provides an unexpected benefit and is not described or suggested by any of the cited references.

For at least these reasons, no proper combination of Keyser, O'Brian and Baldo describes or suggests the claimed combination of EL elements, and, accordingly, applicant requests withdrawal of the rejection of claim 1 and the claims that depend from it.

Independent claims 2-4 and dependent claims 16-18 and 20-52 have been rejected as being unpatentable over Keyser in view of Hseuh (U.S. Patent No. 5,932,892), O'Brien, and Baldo.

Claims 2-4 recite light emitting devices having the same combination of EL elements as is recited in claim 1. Hseuh does not remedy the failure of Keyser, O'Brien, and Baldo to describe or suggest this combination. Accordingly, applicant requests reconsideration and withdrawal of the rejection of claims 2-4 and their dependent claims for the reasons described above.


Applicant submits that all claims are in condition for allowance.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

1/5/04



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